

NJ Department of Education
Office of Educational Technology
Digital Learning NJ (DLNJ)
Instructional Support-Standard 8.1A

<p>8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate to create and communicate knowledge.</p>
<p>A. Technology Operation and Concepts: <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i></p>
GRADES K-2
<ul style="list-style-type: none"> • How any device “works”—switches, navigation, interface with other devices • Familiarity with primary functions of applications and other technology resources <p>Focus for instruction: <i>Creating opportunities for students to use digital devices in the course of instruction and play, and encouraging their conscious awareness of how devices and applications work to perform tasks for humans.</i></p>
GRADES 3-5
<ul style="list-style-type: none"> • Interactions among tools and resources: for example, devices + peripherals; application + application • How to access information in a digital environment • How to create and use data for particular purposes <p>Focus for instruction: <i>Integrating the use of digital tools and resources in subject matter learning and assignments; giving students opportunities to discover the resources available in the digital world; teaching students how to research and create in a digital environment.</i></p>
GRADES 6-8
<ul style="list-style-type: none"> • Create, format, manipulate, analyze and/or interpret data for publication or reporting in multiple digital applications • Explore a real-world problem using digital tools to develop an understanding of the issue • Create or use a digital simulation to explore a real-world problem and possible alternative solutions <p>Focus for instruction: <i>Integrating online digital resources and tools with subject matter research and reporting; introducing students to the power of digital simulation to explore issues and problems.</i></p>
GRADES 9-12
<ul style="list-style-type: none"> • Create, format, manipulate, analyze and/or interpret data for publication or reporting in multiple digital applications • Explore a real-world problem using digital tools to develop an understanding of the issue • Create or use a digital simulation to explore a real-world problem and possible alternative solutions <p>Focus for instruction: <i>Integrating online digital resources and tools with subject matter research and reporting; introducing students to the power of digital simulation to explore issues and problems</i></p>

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8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate to create and communicate knowledge.
B. Creativity and Innovation: <i>Students demonstrate creative thinking, construct knowledge and develop innovative products and processes using technology. Note that demonstration of this strand underlies all of the student work in all strands of Standards 8.1 and 8.2.</i>
Grades K-2
Use multiple digital tools and resources to illustrate and communicate ideas and stories <i>[note the temporal implications with 8.1.A, for instruction]</i>
Grades 3-5
Collaborate with others to produce a digital account of an event or issue
Grades 6-8
Use digital tools and resources to (a) investigate and gather information from multiple sources on an issue or event and (b) synthesize and present a report of findings
Grades 9-12
Create an original digital product that demonstrates understanding of content (for example, a game or tutorial) <i>[Note the connection to Strand D, demonstration of appropriate application of copyright etc. to an original work]</i>

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8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate to create and communicate knowledge.

C. Communication and Collaboration: *Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. of technology concepts, systems and operations.*

GRADES K-2

- Students use technology tools, including social media, to collaboratively engage in learning activities
 - that involve multiple different media formats
 - with students in other classes, schools, or geographic locations.

Focus of instruction:

Creating opportunities for students to collaborate to accomplish a common goal using digital tools; introducing students to different media formats and their uses

GRADES 3-5

- Using digital tools and online resources, students interact with other learners from a broad variety of cultures and geographies
 - **to investigate and evaluate** approaches to a world-wide issue,
 - **and present possible solutions** to many audiences in multiple media and formats

Focus of instruction:

Creating opportunities for students to collaborate with other learners outside the classroom to investigate and report on an issue using digital tools

GRADES 6-8

- Using digital tools and online resources, develop and publish the findings from collaborative work with other learners
 - from a broad variety of cultures and geographies
 - to investigate and evaluate approaches to a world-wide issue,
 - and present possible solutions to many audiences in multiple media and formats

Focus of instruction:

Creating opportunities for students to collaborate with other learners outside the classroom to investigate an issue and develop and publish a formal report for multiple audiences using digital tools

GRADES 9-12

- Using digital tools and online resources, develop and publish the findings from collaborative work with other learners
 - from a broad variety of cultures and geographies
 - to investigate and evaluate approaches to a world-wide issue,
 - and present possible solutions to many audiences in multiple media and formats

Focus of instruction:

Creating opportunities for students to collaborate with other learners outside the classroom to investigate an issue and develop and publish a formal report for multiple audiences using digital tools

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8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate to create and communicate knowledge.

D. Digital Citizenship: *Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.*

GRADES K-2

Integrate the concept of “ownership” into instructional activities:

- Books, films, pictures, songs, games, digital applications—all have owners, and we use them in school according to certain rules
- People may create something and then decide to share it with others—but the owner or creator gets to make the sharing decisions

Focus of Instruction:

Introducing students to the idea of ‘ownership’ and developing their understanding, over time, of personal ownership and the rules that protect everyone’s rights to their own property

GRADES 3-5

Include in all appropriate instructional activities reminders to students of the following:

- People create and own their original work, and we have rules about sharing that work that ensures that the original owner/creator **gets the credit for his/her work**
- Users of any resource must know how to figure out **what rules apply to the use of the resource**, from the perspective of ownership. Students must be reminded of the importance of **considerations of online safety, online security, and ethical decision-making** in using any digital tools for personal or school purposes.

Focus of Instruction:

Instruction in and reinforcement of the concept of ‘ownership’ and the consequent rules about using or referring to anything that is owned by another person, including things that are not necessarily visible. Instruction in and reinforcement of the standards for online safety, security and ethics.

GRADES 6-8

Students are expected to

- **Apply** appropriate online behaviors in regard to online bullying, safety, security and ethical behaviors
- **Demonstrate** an understanding of the **appropriate uses and the consequences of misuse** of social media
- In all learning activities and products, students must **demonstrate an understanding** of
 - Appropriate digital citation
 - Fair use and Creative Commons
 - Ability to assess the credibility and accuracy of digital content
- Include in all appropriate instructional activities reminders to students of the following:
 - People create and own their original work, and we have rules about sharing that work that ensures that the original owner/creator **gets the credit for his/her work**
 - Users of any resource must know how to figure out **what rules apply to the use of the resource**, from the perspective of ownership. Students must be reminded of the importance of **considerations of online safety, online security, and ethical decision-making** in using any digital tools for personal or school purposes.

Focus of Instruction:

Instruction in and reinforcement of the concept of 'ownership' and the consequent rules about using or referring to anything that is owned by another person, including things that are not necessarily visible. Instruction in and reinforcement of the standards for online safety, security and ethics, particularly in regard to social media.

GRADES 9-12

Research and define own personal digital footprint

- Identify the impact of all aspects of the footprint
- Evaluate the potential consequences of unauthorized access to personal digital information and the unauthorized dissemination of such information

Complete research-based digital projects that

- Demonstrate understanding of comparative global policies on filtering and censorship
- Produce an analysis of the capabilities and limitations of digital resources AND their potential to meet personal, social, lifelong learning and career needs

Focus of Instruction:

Creating the opportunity for students to understand their own digital footprints and their potential consequences; requiring student to complete research-based digital projects that will result in their awareness of multiple perspectives on filtering and censorship and projects that will require them to analyze and evaluate strengths and weaknesses of digital resources in light of their own needs

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8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate to create and communicate knowledge.

E. Research and Information Fluency: *Students apply digital tools to gather, evaluate, and use information.*

GRADES K-2

- Use digital resources to explore problems and issues

Focus for Instruction:

Giving students repeated and varied opportunities to use digital tools in their learning and playing, making them conscious of how these tools work and what they can do to help accomplish a goal

GRADES 3-5

- Use digital resources to explore problems and issues AND **evaluate information sources in terms of**
 - Accuracy
 - Relevance
 - Appropriateness for the task

Focus for Instruction:

Giving students repeated opportunities to use digital resources to accomplish their learning tasks, with particular emphasis on using those tools for research and exploration and learning to evaluate digital information

GRADES 6-8

- **Use a variety of search tools and filters to access multiple data bases** (for example, census data, the Bureau of Labor Statistics, the Departments of Education, Agriculture, Health & Human Services) in order to find information relevant to the solution of a real world problem.
- **Process the resulting data and create a report of results**

Focus for Instruction:

Giving students repeated opportunities to learn to use search tools and filters to access multiple data bases to accomplish subject-specific tasks; requiring students to process data they find using digital tools and create reports of results

GRADES 9-12

- **Produce a position statement about a real world problem**
 - Based on a systematic investigation of the problem
 - AND synthesis of information from multiple sources
- **Complete a research project focused on the impact on unethical use of digital tools**
- **Present the results of the research to peers**

Focus for Instruction:

Creating opportunities for students to investigate a real-world problem and requiring them to take a position on it and support it with their research; requiring students to do research on the ethics of digital tool use

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8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate to create and communicate knowledge.			
F. Critical thinking, problem solving, and decision making: <i>Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.</i>			
K-2	3-5	6-8	9-12
<p><i>Note that all problems and issues engaged by students at this level in all strands of Standard 8.1 should be authentic and should lead to significant questions for students to investigate and attempt to answer.</i></p> <p><i>See the suggested demonstration of student learning in Strand A as a possible response to the “Indicator” in this strand. One of the tools students should learn to use if geographical mapping applications.</i></p>	<p><i>Note that all problems and issues engaged by students at this level in all strands of Standard 8.1 should be authentic and should lead to significant questions for students to investigate and attempt to answer.</i></p> <p><i>See the suggested demonstration of student learning in Strand E as a possible response to the “Indicator” in this strand. The topic or problem that will serve as the focus of this activity could be a scientific inquiry.</i></p>	<p><i>Note that all problems and issues engaged by students at this level in all strands of Standard 8.1 should be authentic and should lead to significant questions for students to investigate and attempt to answer.</i></p> <p><i>See the suggested demonstration of student learning in Strand A as a possible response to the “Indicator” in this strand.</i></p>	<p><i>Note that all problems and issues engaged by students at this level in all strands of Standard 8.1 should be authentic and should lead to significant questions for students to investigate and attempt to answer.</i></p> <p><i>See the suggested demonstration of student learning in Strand D as a possible response to the “Indicator” in this strand.</i></p>